

What is claimed:

1. A deflection yoke comprising:

5 a coil separator having a screen portion, a neck portion, and a connection portion coupled between the screen portion and the neck portion, and having at least one protrusion formed on at least one of the screen portion and the neck portion;

10 a horizontal deflection coil disposed on an inside of the coil separator to generate a horizontal magnetic field;

a vertical deflection coil disposed on an outside of the coil separator to generate a vertical magnetic field, and having a pin hole formed on a position corresponding to  
15 the at least one protrusion inserted into the pin hole to couple the vertical deflection coil to the coil separator; and

a ferrite core disposed on the vertical deflection coil to strengthen the vertical magnetic field.

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2. The deflection yoke of claim 1, wherein the vertical deflection coil comprises a screen bent portion, the coil separator comprises a support formed on the screen portion to support the screen bent portion, and the at  
25 least one protrusion of the coil separator is coupled to an upper portion of the screen bent portion of the vertical deflection coil so as to attach the vertical deflection coil to the coil separator.

30 3. The deflection yoke of claim 1, wherein the at least one protrusion comprises:

an inclined surface inclined with respect to a direction in which the vertical deflection coil is mounted

on the coil separator; and

a coupling surface preventing the vertical deflection coil from being released from the at least one protrusion.

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4. The deflection yoke of claim 1, wherein the at least one protrusion comprises first and second sub-protrusions formed on the screen portion and the neck portion of the coil separator, respectively, and the at least one pin hole comprises first and second sub-pin holes formed on the coil separator at positions corresponding to the first and second sub-protrusions.

5. The deflection yoke of claim 4, wherein the coil separator comprises first and second supports formed on the screen portion and the neck portion of the coil separator, respectively, and the first and second sub-protrusions are formed on a lower surface of the first support and an upper surface of the second support, respectively.

6. The deflection yoke of claim 5, wherein the coil separator comprises an assembling projection, and the ferrite core comprises an assembling groove corresponding to the assembling projection.

7. A deflection yoke comprising:  
a coil separator having a screen portion, a neck portion, and a connection portion formed between the screen portion and the neck portion, and having at least one support having a protrusion; and

a vertical deflection coil disposed on the coil separator to generate a vertical magnetic field, and having

at least one pin hole which is formed on a position corresponding to the at least one protrusion and through which the protrusion of the coil separator is coupled to the vertical deflection coil.

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8. The deflection yoke of claim 7, wherein:

the pin hole comprises,

a plurality of pin sub-holes;

the vertical deflection coil comprises,

10 a plurality of vertical deflection sub-coils

each having the pin sub-holes; and

the protrusion comprises,

a plurality of sub-protrusions corresponding to respective ones of the pin sub-holes.

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9. The deflection yoke of claim 8, wherein the pin sub-holes are disposed at corresponding ones of end portions of each of the vertical deflection sub-coils.

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10. The deflection yoke of claim 8, wherein the sub-protrusions are inserted into corresponding ones of the pin sub-holes when the vertical deflection sub-coils are attached to the coil separator.

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11. The deflection yoke of claim 7, wherein the support comprises a first portion coupled to the coil separator, a second portion extended from the first portion in an radial direction of the coil separator, and a third portion extended from the second portion in a circular direction of the coil separator.

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12. The deflection yoke of claim 11, wherein the at least one protrusion is formed on the third portion of the

support to face one of the screen portion and the neck portion.

13. The deflection yoke of claim 11, wherein the  
5 third portion is a free end.

14. The deflection yoke of claim 11, wherein the vertical deflection coil comprises:

a portion disposed between the third portion of the  
10 support and the coil separator.

15. The deflection yoke of claim 14, wherein the protrusion is inserted into the pin hole when the portion of the vertical deflection coil is inserted between the  
15 third portion of the support and the coil separator.

16. The deflection yoke of claim 7, further comprising:

20 a ferrite coil having a plurality of ferrite sub-coils each having assembling grooves, wherein the coil separator comprise a plurality of assembling projections corresponding to respective assembling grooves, and the assembling projections are extended in a radial direction  
25 of the coil separator.

17. The deflection yoke of claim 7, wherein the protrusion comprises:

30 an inclined surface inclined with respect to a direction in which the vertical deflection coil is disposed to be coupled to the coil separator; and

a hook surface on which the protrusion is disposed when the vertical deflection coil is completely coupled to

the coil separator so as to firmly couple the vertical deflection coil to the coil separator..

5 18. The deflection yoke of claim 7, further comprising:

a ferrite coil having a plurality of ferrite sub-coils each having assembling grooves, wherein the coil separator comprises a plurality of assembling projections corresponding to respective assembling grooves.

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19. The deflection yoke of claim 18, wherein the assembling projections are disposed in corresponding ones of the assembling grooves when the ferrite sub-coils are attached to the vertical deflection coil.

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20. A deflection yoke comprising:

20 a coil separator having a screen portion, a neck portion, and a connection portion, having first supports formed on the screen portion and first protrusions, and having second supports formed on the neck portion and second protrusions; and

25 a plurality of vertical deflection sub-coils disposed on an outside of the coil separator to generate a vertical magnetic field, having a screen bent portion and a neck bent portion, and having first pin holes formed on the screen bent portion to receive corresponding ones of the first protrusions of the coil separators, and second pin holes formed on the neck bent portion to receive corresponding ones of the second protrusions.

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21. The deflection yoke of claim 20, further comprising:

a ferrite core covering the vertical deflection coil

and having a plurality of assembling grooves, wherein the coil separator comprises:

5 a plurality of assembling projections inserted into corresponding ones of the assembling grooves when the ferrite core is completely attached to the vertical deflection coil.

22. A display device having a deflection yoke, comprising:

10 a coil separator having a screen portion, a neck portion, and a connection portion formed between the screen portion and the neck portion, having first supports formed on the screen portion and first protrusions, and having second supports formed on the neck portion and second  
15 protrusions; and

a plurality of vertical deflection sub-coils disposed on an outside of the coil separator to generate a vertical magnetic field, having a screen bent portion and a neck bent portion, and having first pin holes formed on the  
20 screen bent portion to receive corresponding ones of the first protrusions of the coil separators, and second pin holes formed on the neck bent portion to receive corresponding ones of the second protrusions.

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